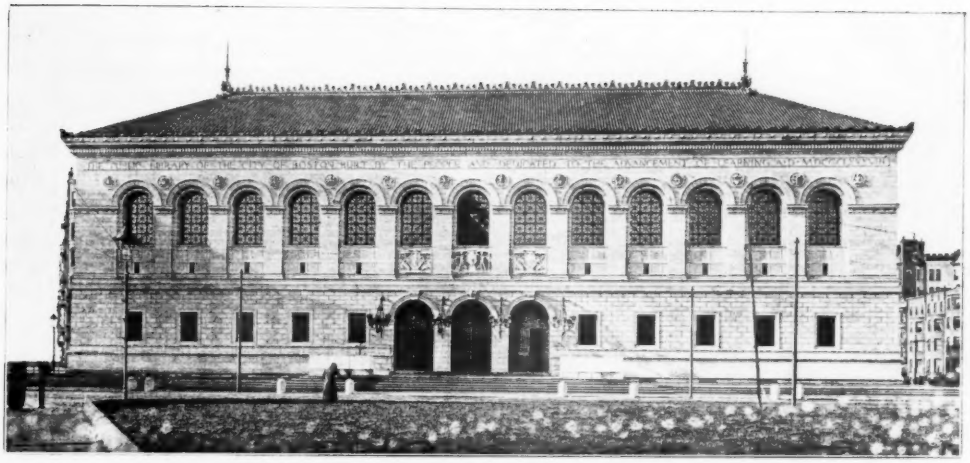


THE PUBLIC LIBRARY, BOSTON, U.S.A. (Messrs. McKim, Meade, and White, architects.)

# PUBLIC LIBRARIES.

By J. M. Brydon [*F.*] and F. J. Burgoyne.

**Read before the Royal Institute of British Architects, Monday, 20th February 1899.**

## I.—THE BUILDINGS. By J. M. Brydon [*F.*].

A FEW months ago Mr. T. G. Jackson kindly favoured us with a most interesting Paper on "Mediæval Libraries," and in continuation of the same scheme it is my privilege to-night to draw your attention to the public library in its more modern aspect. The subject in itself is so full of interest, alike to the architect and the librarian, not to mention the public for whose benefit such institutions are established, that it has been deemed advisable to divide the labours of the evening, so that you may have the matter put before you from the experience of the librarian as well as that of the architect; and for the former we are to be congratulated in being so fortunate as to secure a Paper from Mr. F. J. Burgoyne, the librarian of the Central Library at Brixton, and the author of the well-known book on *Library Construction*, which has become a text-book on all that pertains to the formation of a well-regulated library. Bearing this in mind, I propose to confine myself more to the buildings from an architectural point of view, their types of plan, and the artistic expression of their purpose, leaving to the competent hands of Mr. Burgoyne the important matters of the general arrangements of the books, and the fittings and furniture most suitable for the work of a public library in the most popular sense of the term. Let me say, however, at the outset that this division of the subject does not in any way promulgate such a heresy as that a building can be designed, either in regard to its plan or elevation, without reference to its purpose or the arrangements vital to an adequate fulfilment of it; but only that we may have the benefit of the ripe experience of a practical librarian like Mr. Burgoyne in matters to which he has given special attention, and which he has been able to test by results from actual working.

I do not propose either to enter into a history of the modern library as such, or trace its genesis down from such notable examples as the Laurentian Library at Florence, the Libraries

of St. Mark's at Venice, of the Vatican at Rome, of the Radcliffe at Oxford, of Trinity College at Cambridge, or the other Trinity College in Dublin—all erected by great masters of our craft; or, again, to engage in a disquisition on the educational advantages of public libraries and the impetus given to their establishment by the passing of the Public Libraries Act. I take it we are all pretty well acquainted with the one, and pretty well agreed upon the other. In spite of such poor benighted parishes as St. Marylebone, St. Pancras, and Islington in the greatest and most enlightened city in the world, libraries continue to increase and multiply throughout Great Britain and America at a rate that must gladden the heart of every one interested in the advancement of general knowledge.

Perhaps the opponents of—or shall I say the objectors to?—public libraries may be of the opinion of Sir Anthony Absolute, that "a circulating library in a town is a flagrant tree of diabolical knowledge," or in the matter of a public news-room agree with Burke, that "if a man reads a newspaper regularly for six months he will become a convert to its views"—and consequently come to the conclusion that the knowledge thus gained and the views thus acquired are not to be trusted so far as the long-suffering ratepayer is concerned. Rather let us hope that some day the great parishes and others who oppose the forward movement may come to admit that the nations which possess the most extensive libraries maintain the foremost rank in civilisation.

My object this evening is to place before you, with as full illustrations as possible, something of what has been recently done in library building, so that we may learn what to follow in the future. As Mr. Burgoyne truly says in his admirable little book, "a suitable site lies at the foundation of a satisfactory library building;" and a site to be suitable for the purpose, or for the locality the building is destined to serve, must be central and yet at the same time quiet; it must be ample in area to allow for future extension: as I may have to point out later on, nothing grows so fast as a library. The site must have a good light all round, and, last but not least, it must be dry. In shape it should, if possible, be rectangular; all awkward and angular sites are to be avoided, as, for their size, both costly to build upon and wasteful to work. It must never be forgotten that a library is a public building in every sense of the word; it is usually built by the public and used by the public, and therefore should be in as prominent as well as suitable position as can be obtained. Then as to the building itself. Public libraries are, broadly speaking, of two classes—the purely reference library, such as that at the British Museum or the National Library of Ireland, where the reading-room is the architect's great opportunity for design; and reference and lending libraries (the circulating library of our friend Sir Anthony), combined with reading-rooms for newspapers and magazines. This latter is the truly popular library; everybody reads the papers nowadays, and therefore rooms must be provided where a man may walk in and out when he pleases to peruse any or all of the papers he has a mind to. It is manifest that in a free and open system such as this proper supervision is of the first importance, and the architect's first difficulty in this respect is usually the smallness of the official staff available for such a purpose. Mostly all libraries are understaffed—it is the constant complaint of librarians that they are allowed too few assistants—consequently the arrangements of the plan must be concentrated as much as possible. The officials must be able to supervise at a glance, so to speak, all the rooms to which the public have access. The ideal plan would therefore seem to be that which provides all the public rooms on one floor; but with sites of restricted area or libraries of any size this is not always possible, and therefore the rooms to which most frequent and rapid access is required, such as the news-room and the lending library, with such specialities as boys' rooms, &c., should be placed on the ground floor, leaving the reference-rooms and possibly the magazine-rooms, which are less frequented, to be accommodated on an

upper floor. It is essential also that the access to all these rooms should be short, ample, and well lighted.

These remarks sound like truisms to all who have had to do with library building, but it is nevertheless necessary to bear them constantly in mind when judging of the arrangements of plan and their adaptability or otherwise to the fulfilment of their purpose. Then again what may be called the administrative portion of the library, such as the book stores, the librarian's office, and the work-rooms for his staff, must be conveniently placed for the service of the department to which they are more particularly attached. It is not at all necessary that the librarian should see everything, even the entrance hall, from his office—he has something much more important to do with his time than watch people coming and going: the staff must divide this amongst them—but his room can also be used for the periodical meetings of the committee or board responsible for the maintenance and conduct of the library. The storage of books—in the book store as we call it, or the "stack room" of our American friends—is a question of the first consideration, and one on which Mr. Burgoyne will have something important to say—examples of various types are on the screens before you—notably the cleverly designed book stacks of the American libraries, a version of which arrangement is to be found in the National Library of Ireland and in the British Museum.

Of course, much depends on the size and scale of the library itself—whether it may be the central institution with a number of affiliated branches, or one of such branches themselves. The general principle of the planning is the same throughout—simplicity of access and ease of supervision are the keynotes on which the whole system is worked out. The public rooms should be lofty, well lighted, and thoroughly ventilated—more especially so is this the case with news-rooms, and magazine and periodical rooms, which are apt at certain times of the day to become uncomfortably crowded; and I need hardly point out to members of such an institute as this how essential it is that the air in such rooms should be changed amply and often. Any one, for instance, who enters the reading-rooms in one of our large provincial towns or crowded London parishes during its busiest hours will very soon appreciate the necessity of thorough ventilation, especially if the day be one of those warm, moist, muggy horrors we have more than enough of in this interesting climate of ours.

The planning of a public library is not, for all that, a complicated problem. Its requirements are comparatively few and simple, and lend themselves admirably to a stately and architectural system of design from which some striking effects almost necessarily follow. It must be endowed with a fitting dignity both in plan and elevation.

The reading-rooms, which are of no mean size, readily lend themselves to nobility of treatment, and give ample scope for the designer's knowledge of proportion—all such excrescences as fussy little bay windows and other nooks and corners are utterly uncalled for. They may be very picturesque in the dining-room or the drawing-room of a country house, but are quite out of place in a town library. The rooms should possess in themselves that quiet dignity of effect which can only be obtained by good proportion and restraint in design—they should impress one as eminently restful rooms. Any one who has seen the library of the Reform Club by Sir Charles Barry will know exactly what I mean. It is a model reading-room, full of a sense of repose, inviting to study and regretful to leave. "In quietness shall be your strength" was never more true than as a keynote to the designing of reading-rooms for a public library.

The lending library is simply a book store with a large space, and plenty of counter room for the public. More, I think, might often be made of this latter requirement: why cannot it be treated as a hall or lobby by itself, instead of simply a portion cut off the lending library? One side or more could be occupied by the issuing and receiving counters, with

a handsome opening between the delivery hall, so to speak, and the book store. This idea has been carried out in some of the American libraries, and more particularly in that at Boston, with great richness of treatment. In the latter the delivery room is 64 feet long by 33 feet wide, and 20 feet high, and is decorated in the most sumptuous manner; its floor is paved with Istrian and Verona marble, its walls are panelled for about 11 feet high with oak, above which, 8 feet in height, are Mr. Edwin Abbey's decorative paintings illustrating the "Quest of the Holy Grail." The ceiling is heavily raftered and painted in colour. The doorways and fireplace are of rich decorative marbles, principally rouge antique and Levanto, the doors themselves being of oak; and to show you that all this gorgeousness of marble and colour does not in any way interfere with the business to which it is dedicated, in 1894 a million and a half of volumes were issued to readers, either for home use or reading in the library. The normal time required to obtain a book is about seven minutes; indeed, the alcove of the delivery room is the busiest spot in the library. The stack room adjoins it, and application slips are sent through pneumatic tubes to all parts of the latter. The books come back to the alcove by means of a little electric railway with low wire basket carriages, and running at the rate of 500 feet per minute.

Considering that the stack room is six low stories in height, and that the delivery alcove is obviously only on the level of one of them, the book railway has to be supplemented by miniature elevators, one for each floor above or below the level of the alcove, and by an ingenious arrangement the railway and the elevators automatically play into each other's hands, with the result that the little carriage is tipped out and rolls into the alcove.

I may mention in passing that there are now over 500,000 volumes in the stack room, and that the annual increase is about 25,000.

Another type of delivery room is that at the Edinburgh Public Library, where the architect tells us the model adopted was that of the telling room of a Scotch bank. The central space is devoted to the public, the counters round three sides, with alcoves behind them, for the storage of 48,000 books. It will be seen from the plans that this arrangement gives scope for and is treated with considerable architectural effect, with the result that the lending library becomes a handsome hall instead of simply a store-room with a portion cut off. It seems to me that an architectural point has here been missed in many of the recent English public libraries.

I have said that no institutions grow so fast as Public Libraries, and one notable direction in which they are growing and are likely to develop still more rapidly in the future is in the provision of rooms for special purposes—such as ladies' rooms, boys' and girls' rooms; studies for special subjects—such as art-lecture rooms, and even class rooms, with probably a gallery for pictures or museum purposes. These are quite independent of the question of providing space for the constantly increasing number of books, so that the library of the future will necessarily cover more space than has been planned for in the past; in fact, the tendency will be for the public library to become more and more the centre of culture and enlightenment of the district in which it is placed, wielding an influence which must ever become wider and stronger. May I plead that the building also, apart from its books, may be of such a character as to assist rather than retard this influence; that the setting may be worthy of the jewels within its walls; that the suburban villa type with its useless turrets and bay windows, to which I have already alluded, may be altogether discarded; that in short, the building in itself may be endowed with that distinction of style and nobility of design which will render it an enjoyment and inspiration to all who hope for the growth of a living interest in architecture as a fine art?

On the principle that a grain of practice is worth an ounce of precept, I am enabled,

through the kindness of their architects, to place before you plans and views of some typical public libraries recently carried out in England and America. Among these, to take the smaller libraries first, will be found the library on one floor, as at West Ham ; the library on two floors, as at Brixton, Chelsea, and Wolverhampton ; and the library on three or more floors, as at Edinburgh—the latter being dictated by the necessities of the site.

In the two-floor libraries the more frequented rooms, such as the news-room and the lending library, are on the ground floor, and the remainder on the first floor. At Edinburgh the question of access has been very cleverly arranged—the lending library is on the ground floor, with the news-room one floor below and the reference library one floor above it. Then of the larger or more important libraries, the plans are shown of the National Library of Ireland, and the Liverpool Library, in both of which the great reading-room is designed with special reference to its importance in an architectural as well as a bibliothecal sense.

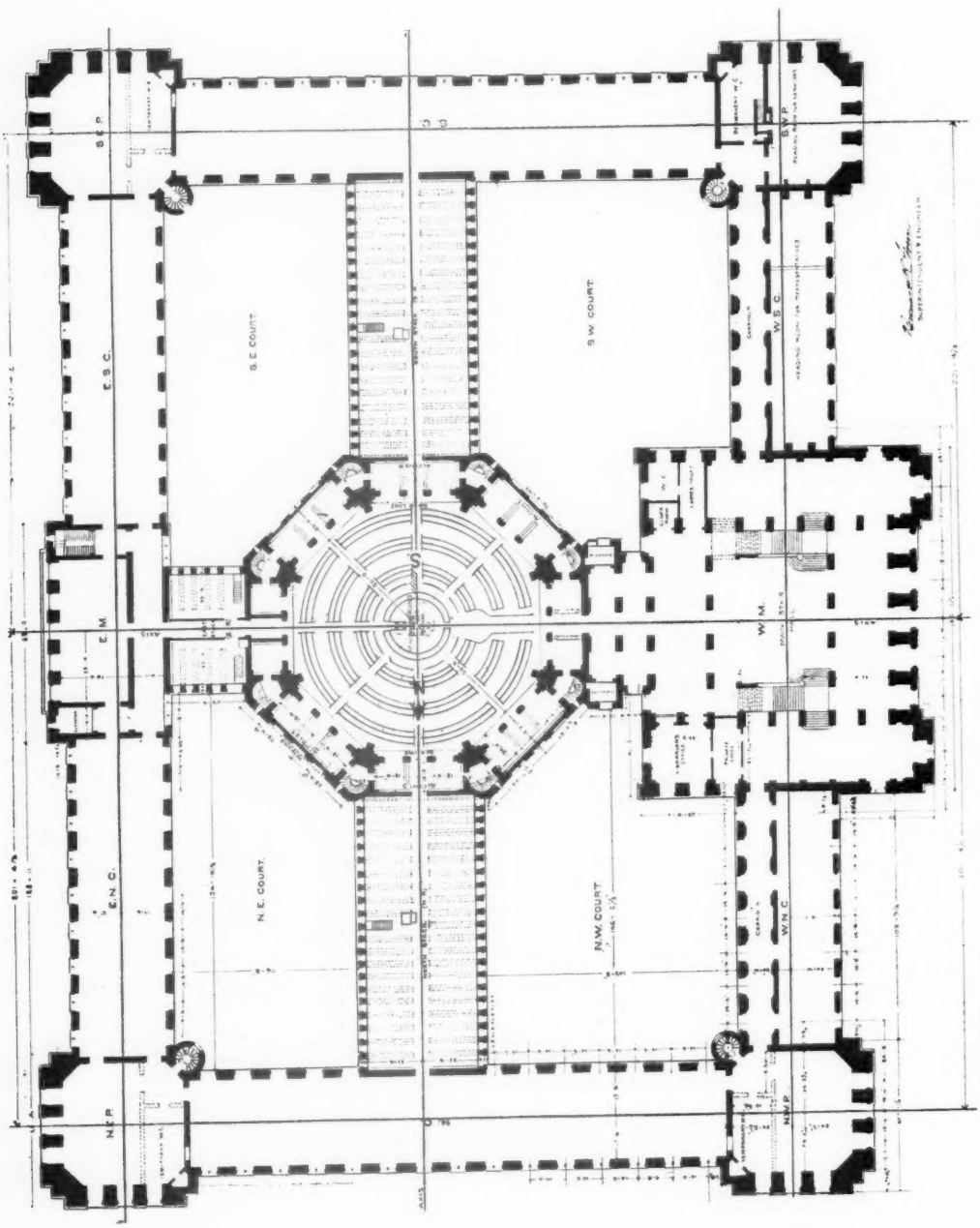
The National Library of Ireland is one of the largest and most complete of our reference libraries recently built. It was designed by Sir Thomas Deane, who had the great advantage of the advice and assistance of its late chief, Mr. William Archer, F.R.S., in planning the general arrangements. These, as well as its architectural treatment, will be understood from the plans and views so kindly lent me by the present librarian, Mr. Thomas Lyster.

If these examples are doubtless all more or less familiar to most of you, I am fortunate this evening, through the great kindness of their designers, or the authorities in charge of the buildings, in being able to place before you illustrations of four of the most important libraries recently built or building in America—viz. the Congressional Library at Washington, the Public Library at Boston, the Columbia University Library, New York, and the Public Library about to be erected in New York.

To take them *seriatim*, let me first direct your attention to the library at Washington, which we are told by the official handbook is "not the mere reference library for the legislative branch of the Government that its name would imply," but "the library of the whole American people, directly serving the interests of the entire country." A truly national library in the fullest sense of the term, and in effect a kind of British Museum and parliamentary library rolled into one.

It was founded in the year 1800. Thomas Jefferson, the then President, called it the "Library of the United States." The first catalogue was issued in April 1802, from which it appears there were then on its shelves, all told, some 964 volumes and nine maps. In 1896 the library contained roughly 755,000 volumes of books, 250,000 pamphlets, 500,000 pieces of music, 25,000 maps, and 256,000 engravings, photographs, and pictorial illustrations in general. In the long history of nearly a hundred years there is one incident to which we, as Britons, cannot look back without a deep regret born of those regretful days. The library was then accommodated in the Capitol, only two wings of which were finished. The British troops entered Washington in August 1814. Admiral Cockburn of the Royal Navy, with a crowd of officers and men, entered the House of Representatives, and seating himself in the Speaker's Chair called the assemblage to order. "Gentlemen," he shouted, "the question is, shall this harbour of Yankee democracy be burned? All in favour of it will say 'Aye;' those against will say 'Nay.' The 'Ayes' have it!" cried the bold Briton. "Light up;" and soon the accumulations of the first dozen years of the library's existence were reduced to ashes, the books being used as kindling for the north wing. That was not the last time it was unfortunately burned ; but it was the first and only time it suffered from an act of war.

The library continued in the Capitol till its old quarters became utterly inadequate. The first Act of Congress providing for the new building was passed in April 1886, the




THE LIBRARY OF CONGRESS, WASHINGTON—PLAN OF GROUND FLOOR. (Messrs. Smithmeyer and Pelz, P. J. Pelz, E. P. Casey, architects.)

second in October 1888; operations were begun in March 1889, and completed in February 1897, at a cost of £1,272,000 sterling.

Its architects were first Mr. Smithmeyer, then General Casey, Mr. Bernard Green, C.E., and Mr. Pelz, the latter having been a partner with Mr. Smithmeyer when the original design—greatly modified subsequently—was made.

General Casey had entire charge of the work until his death in March 1896. In 1892 Mr. Pelz's connection with the work ceased, when the building had reached about half its height, and in his place Mr. Edward Casey of New York was appointed "as Architect and also as Adviser and Superviser in matters of Art." His designs principally include all the most important interior architecture and enrichment in relief and colour; and Mr. Casey continued as architect, in conjunction with Mr. Bernard Green, until the completion of the building. The various duties and share in the responsibility both for design and

THE LIBRARY OF CONGRESS, WASHINGTON. (Messrs. Smithmeyer and Pelz, P. J. Pelz, E. P. Casey, architects.)

construction of these men seem rather complicated, but in the end we have this great national monument, which, though costing, as you see, a vast sum of money, involving the design and execution of architecture, sculpture, and painting of a very high order, yet nevertheless was completed in six years, and moreover within the limit of time set by Congress in 1888, and within the limit of cost by about £28,000. You will hardly expect me to enter on a detailed account of this building—it would take a Paper to itself. Let me rather quote that, as Mr. Green tells us, "Its design was preceded by few or no good examples of library architecture, and was therefore the outcome of theory and deduction rather than the application of established principles," and that "the effort was to plan on general rather than on particular principles, and afford the largest latitude for expansion and rearrangement in the use of the spaces." Thus far as to its general plan; but what will always be its most remarkable feature is the fact that never before had the American Government itself called upon a representative number—some fifty in all—of American painters and sculptors to help to decorate broadly and thoroughly one of its great public monuments. Their work throughout the building forms the most interesting record possible of the scope and capabilities of American art; not only sumptuousness of design, but richness of materials have been pressed into the service—marble, bronze, mosaic, fresco, and choice woods all bear their part. Let me direct your attention to the two most prominent features in the structure—the staircase hall, and the rotunda or main reading-room; both are a blaze of rich marbles and decoration, and both in colour and relief are marked by a magnificence of architecture above anything else in the building. In the rotunda the columns and pilasters of the piers carrying the dome are of red Numidian marble, resting on pedestals of dark purple Tennessee marble, their capitals being gilded. The screens between the piers are of yellow marble, and the portrait statues which surmount the balustrade are of bronze. The room is lighted by eight lunettes filled with delicately tinted glass.

In general dimensions the building is 468 feet long from north to south, 340 feet deep from east to west, by 72 feet high, and occupies, exclusive of approaches, $3\frac{3}{4}$ acres. The rotunda is 100 feet diameter, nearly the same as the dome of St. Paul's Cathedral, by 125 feet high to the top of the dome, and 160 feet to the domed ceiling of the lantern. These figures will assist you to realise the scale of the building, and the plans and photographs on the walls give a general idea of its character.

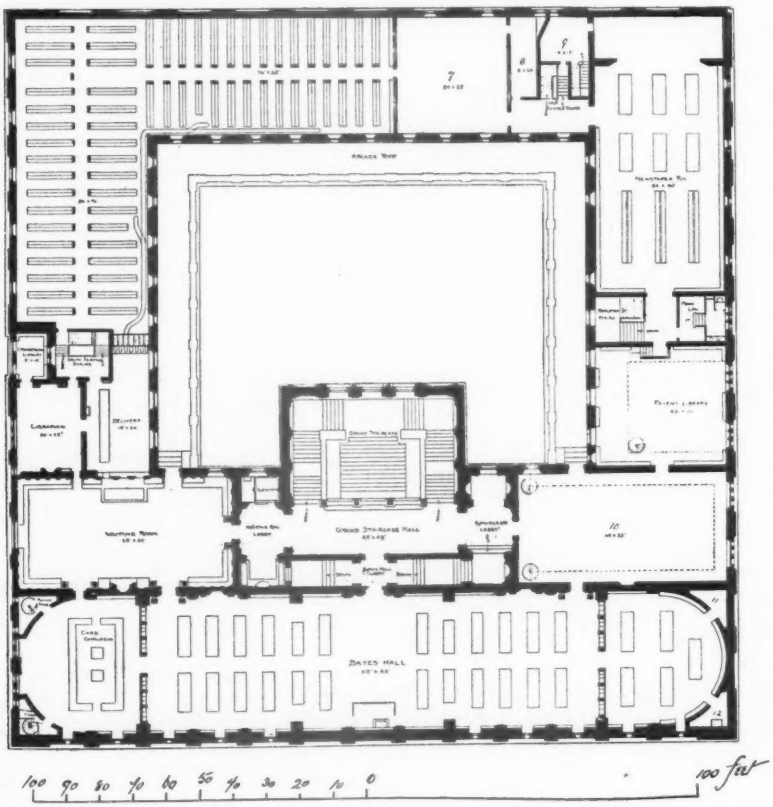
The Government of the United States having set such a noble example, it will not astonish us to find the great cities of the Republic vying with each other in the erection of public libraries. That at Boston is a typical example. Its architects were Messrs McKim, Meade, and White of New York—or, to be perhaps more correct, as this is a public monument, Mr. Charles McKim, the senior member of the firm. As the official handbook has it, he "was the actual architect, designing the building from cellar to roof-tree."

The foundation-stone was laid in November 1888, and it was completed in February 1895, at a total cost, exclusive of the site, of £473,000. The general dimensions are 225 feet long, 227 feet deep, and 70 feet high; the material used is a pink granite from Milford, Mass. The design of the front reminds one of the library of St. Geneviève in Paris, but it is only a very general resemblance. I have already incidentally noticed some of its arrangements in regard to the lending library. The great architectural features of its interior are the Staircase Hall and the Bates Hall—the former notable for the noble series of mural paintings by M. Puvis de Chavannes which adorn its walls. The great painter (alas! now no more) has left it on record that, when commissioned to decorate this staircase, he sought for a main idea for his compositions, and asked himself "What is a public library?" "It is the conservatory of human knowledge," he said, and therefore he must glorify human know-

INTERIOR OF THE ROTUNDA, LIBRARY OF CONGRESS, WASHINGTON. (Messrs. Smithmeyer and Pelz, P. J. Pelz, E. P. Casey, architects.)

ledge. "But in what form?" he asks again, and the reply was, "Letters and Science; and in each one of these branches I found a multitude of subdivisions." The result is the eight magnificent panels illustrating Philosophy, Astronomy, History, Chemistry, Physics, Pastoral, Dramatic, and Epic Poetry. The staircase corridor is also decorated by M. Puvis de Chavannes, the cost of the whole series being about £10,000.

The Bates Hall is named in honour of Joshua Bates, who in the early days of the library —it was founded as an institution in 1852 — gave £10,000 to its funds, and £10,000 worth of books.




PUBLIC LIBRARY, BOSTON—PRINCIPAL FLOOR. (Messrs. McKim, Meade, and White, architects.)

Here a little link connects the great Boston library with old England, in a much pleasanter manner than Admiral Cockburn's fire at Washington. Mr. Bates, though born in Massachusetts, came early in life to London, and became the head of the great banking house of Baring Bros. in the City. Bates Hall is the reference reading room on the first floor, is 218 feet long, 42 feet wide, and 50 feet high to the crown of its arched ceiling. Its ends are semicircular, with half-domed ceilings. It is lighted by thirteen windows along the east side, and two more at the south end, all set high in the walls. At the north end there are no corresponding windows, but a broad panel instead, which is intended to be filled with a painting by Mr. Jas. McNeill Whistler; along the west wall are ten other panels corresponding to the windows opposite, which are also in time to be decorated by eminent painters.

Along the walls, under the window line, are bookcases for some 6,000 books of general reference, which visitors may freely use as they choose.

Bates Hall has accommodation for 264 readers at 33 tables. At the south end is the card catalogue, and pneumatic tubes connect with the stack room, so that the reader does not need to leave the hall, but simply gives his slips to an attendant, and presently the book comes back.

On the second floor is the valuable collection of books on special subjects. The rooms and corridors in which they are placed are reached through a gallery called "Sargent Hall" after the eminent painter, who has undertaken the decoration of its walls. It is 84 feet long, 23 feet wide, and 26 feet high. The ceiling is vaulted, and the hall is lighted from the roof. The decorative paintings will be entirely by Mr. Sargent; the scheme, illustrating the Triumph of Religion, represents certain stages of Jewish and Christian history. It will be remembered that a section of the decoration now in place was shown at the Royal Academy in 1894. Originally Mr. Sargent was commissioned to decorate the lunettes, the frieze, and a section of the ceiling at each end, at a cost of £3,000; but when this was completed in its place in the hall, so great was the admiration it excited that another £3,000 was immediately raised by public subscriptions to enable Mr. Sargent to unite his work for the ends in a scheme which should comprehend the entire gallery. These paintings, with Puvis de Chavannes' in the staircase, and Mr. Abbey's in the delivery room (for which he also received £3,000), are an earnest of the spirit in which the Bostonians have undertaken and are carrying out their great public library. One of the most charming features of the Boston library is the interior court. It is surrounded on three sides by an open arcade of white marble, similar in design to that of the Cancellaria Palace in Rome. In its centre is a marble fountain set about with well-kept grass-plots; along the walls under the arcade are low oak benches, so that on warm days the court may be used as an open-air reading room.

As will be seen from the illustrations, the whole of this building is a most careful study of modern Renaissance thoughtfully and lovingly carried out, and reflecting the greatest credit on Mr. McKim, its architect, and the public spirit that called it into being. Well may the Bostonians feel proud as they read the inscriptions on its frieze, "Founded through the Munificence and Public Spirit of Citizens." "Built by the People and Dedicated to the Advancement of Learning." No wonder a writer on the "Significance of the Library" feels moved to declare his conviction that "with such an equipment and in such surroundings, supported and revered by a community conspicuous for the high average of the culture of its citizens, facing a future full of the promise of new birth in arts and letters, the public library of the city of Boston has every reason to be sure of fulfilling its most confident hopes."

Not only is Boston endowed with this magnificent central library; but in addition the city is served by a series of branches and stations scattered over the various wards; and it may help you to understand the thoroughness with which this great civic system has been carried out if I give a few figures from the official report for the year ending 31st January 1898.

The area of the city of Boston is 43 square miles, and its population in round numbers 529,000—about the size of Liverpool or Manchester. The central library contained 528,000 volumes.

Then there are ten branch libraries, each with an average of 17,000 volumes.

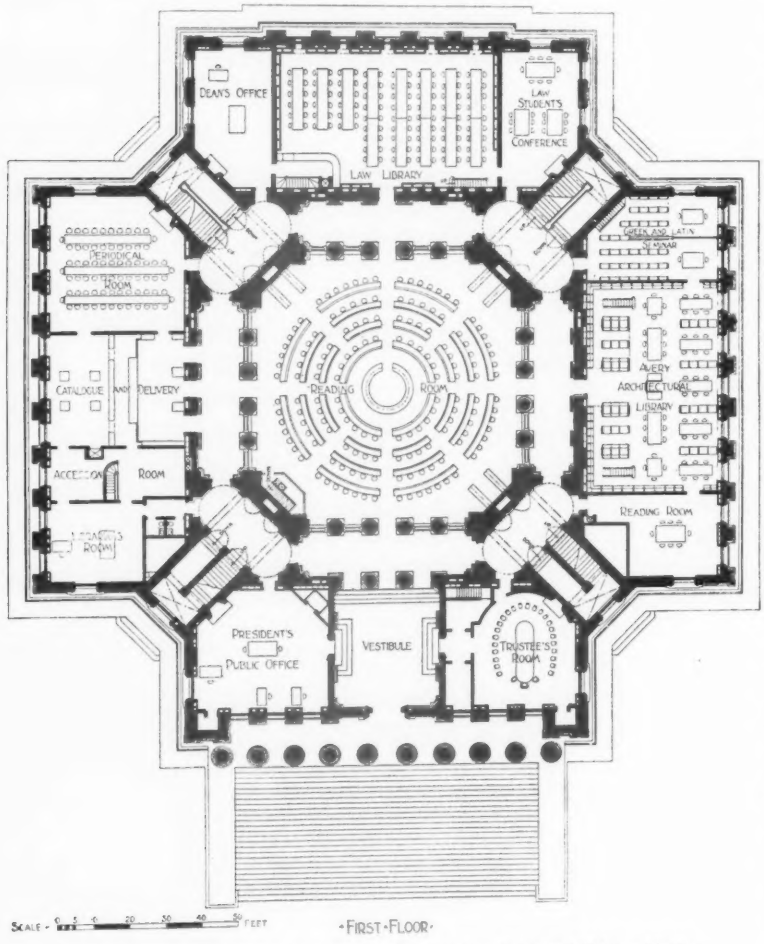
In addition to these there are 17 stations, comprising 4 reading rooms, and 13 delivery stations.

The total additions made during the year reached over 35,000 volumes, and the expenditure on books and periodicals about £8,000.

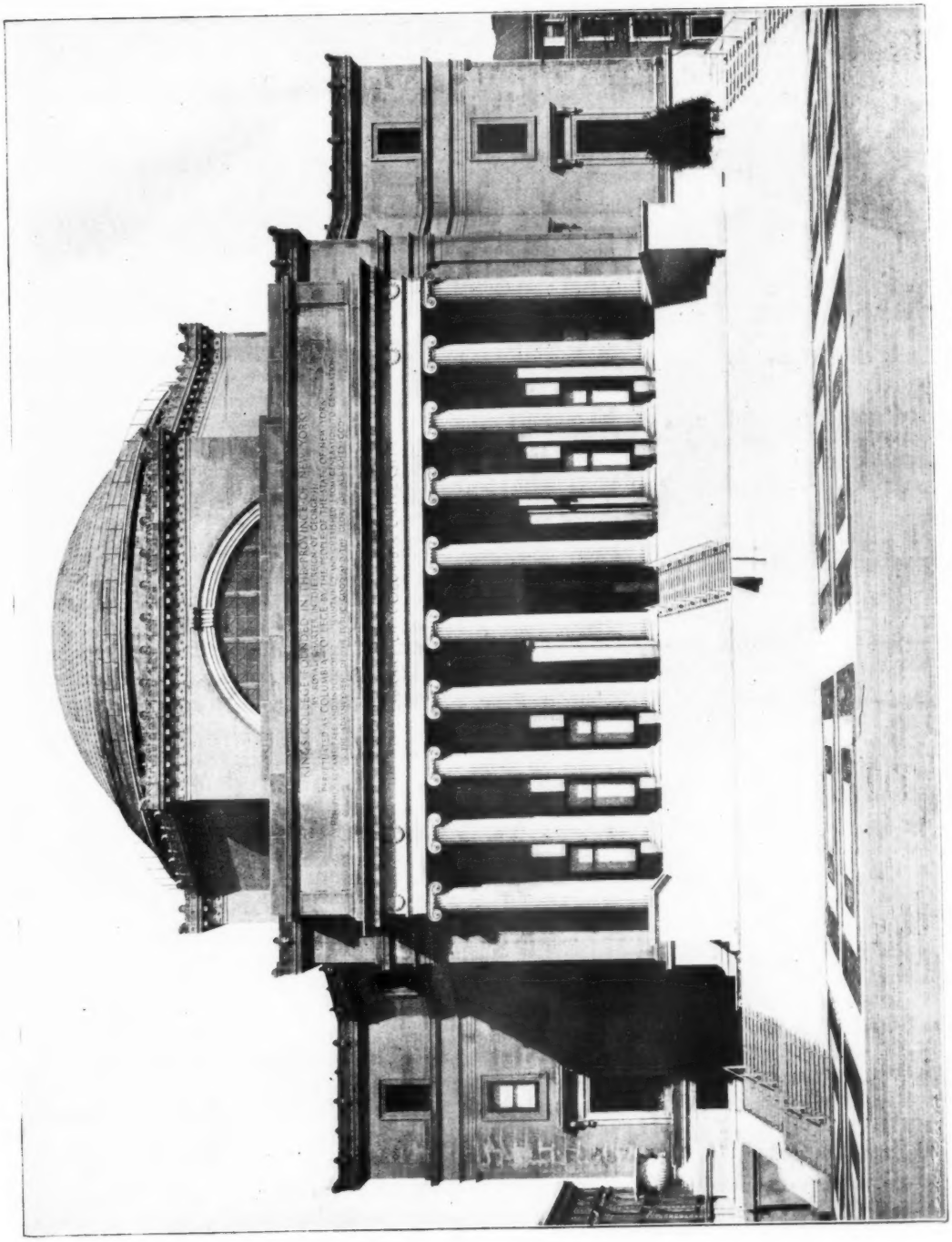
The cost of maintaining this central library and branches was nearly £52,000, of which £47,000 was supplied from city funds, and the remainder from trust funds, gifts, &c. When one realises that this splendid system began only forty-five years ago with less than 10,000 volumes, it will be understood what it is possible for a civic community to accomplish—more

especially when we remember that all this is in addition to other great libraries, such as the Athenæum in the city, and Harvard University in the suburbs—one must admit that it is with some show of reason Boston claims to be the "Hub" of the intellectual universe.

The third American library I have to call your attention to is that of the University of Columbia, New York. As the inscription on its front tells us, Columbia College was originally King's College, and was founded in the province of New York by Royal Charter in the reign of George II. Like many other such institutions, it outgrew its old quarters, and a new site was acquired on Morningside Heights, and there, for some years past, the rebuilding of the University has been going on. The general view and the key plan show that the library is the most conspicuous object in the group of building as yet erected. It was built by Mr. Seth Low, the President of the University, as a free gift, as a memorial of his father, and has cost for construction and equipment nearly £240,000. The architects are Messrs. McKim, Meade, and White, and the large plans and views so kindly lent by them show very completely the architectural character of the building. In plan it is like a Greek cross, with the great reading room at the intersection of the arms, and covered by a dome. It is more severely classic in style than the Boston Library. Nothing could be finer than the manner in which it is placed on the ground, with its magnificent approach of great terraces, and steps leading up to its noble entrance portico of ten Greek Ionic columns. Passing through the entrance hall, adorned with splendid marble columns, the visitor at once enters the great reading room.




COLUMBIA UNIVERSITY LIBRARY, NEW YORK. (Messrs. McKim, Meade, and White, architects.)



COLUMBIA UNIVERSITY LIBRARY, NEW YORK. (Messrs. McKim, Meade, and White, architects.)

It is 75 feet square on plan, with octagonal angles, and is lighted by huge lunettes in each arm of the cross. Though not so large or so elaborate in treatment as the rotunda of the Washington Library, it is in some respects finer in design and more impressive in its simplicity. The columns are Greek Ionic throughout, and all the detail is marked by refinement rather than richness.

The tables in the reading room are arranged in concentric circles, as in the Washington Library, with this exception, that the centre of the circle is occupied by a polygonal bookcase, and books are stacked around between the columns.

The building, besides being used as a general library, is also the laboratory, so to speak, of those faculties whose implements of work are books alone. Thus the north arm of the cross is given up to the law school; on the main floor is the law reading room, with the law book store below it. On either side are rooms for the offices of the school, the professors' rooms, and rooms for the law clubs; similarly, the faculty of political science is located in the western arm of the building, and the faculty of philosophy in the eastern arm. On the upper floors are lecture and class rooms for these faculties. The aim has been to make the use of the books as easy and convenient as possible, alike for professor and student, the library being not only a storehouse for books, but also a laboratory for those who use them, quite as much thought having been given to the reader as to the book. The Avery Architectural Library, a very fine collection, is in the eastern arm, so that at Columbia we may perhaps conclude that architecture is not only a profession and an art, but also a philosophy, seeing it is located with that faculty.

The building may be taken as an example of a typical university library worked out on modern lines to suit modern requirements, and no effort seems to have been spared to make it as perfect as possible for the work to be done within its walls, a utilitarian scheme artistically carried out.

The public library about to be built in New York is the latest of the series. It was the subject of a limited competition last year, and copies of the successful design, kindly sent me by the architects, Messrs. Carrère and Hastings, are on the screens. In this competition the competitors were supplied with a plan prepared by the library authorities, and which had to be followed in all essential particulars; it had been studied with great care, and was a very good scheme, and I understand the successful design does not greatly depart from this official plan. In its main lines it somewhat resembles, with significant differences, the Boston library; but in the instructions was this distinction among others, though the authorities did not object to external splendour, they rather elaborately took up a position in favour of a simple interior, evidently under the impression that with the examples of Boston and Washington before their eyes the competitors would let the project run away with them and sacrifice utility to splendour.

Be that as it may, the winning design, as you will see, has certainly resulted in a good plan, and what promises to be a stately, dignified exterior.

In the first place it will be noticed that the raising of the building on a great terrace is, as at Washington and Columbia, and partially at Boston, again a marked feature of the design. Here it is worked out with greater elaboration of the surroundings, like a formal garden around a house, till site and building become blended in one harmonious whole. It is evident the architects were not content with designing the building alone—it must be provided with a dignified setting; so by means of broad flights of steps, terraces, fountains, and votive columns, the approaches are made to contribute to and enhance the effect of the architectural picture. It seems to me, this is a point to which far too little attention is paid amongst ourselves. Our public buildings are more often than not brought up to the building line, with probably a

sunk area as well, so that the structure seems to rise out of a hole—in one instance, the Natural History Museum at Kensington, it is actually set in one. Yet look at the advantages gained when the building is raised from such a terrace as at Columbia University, or that proposed for the New York Library. Surely it is not enough that the buildings themselves be suitably designed, while their surroundings are left to take their chance. Surely, having got a great architectural work, it is worth some little sacrifice of ground to approach it properly.

It will be noticed that the New York Library promises an improvement on that at Boston, inasmuch as the delivery room of the lending library is on the ground floor, and has a separate entrance to itself. The stack room is one huge block extending nearly the whole length across the building, and is everywhere in communication with the numerous reading rooms—special and otherwise. The architectural treatment of this great stack-room is worthy of attention; here it is brought boldly to the front, instead of being concealed by courts, as at the Washington Library, and is treated in accordance with its importance in the general scheme.

The staircase hall is again a magnificent effort, monumental in its effect. It is to be hoped the desire of the authorities for a "simple interior" will not in its turn run away with them here, but that painting and sculpture will be allowed to contribute to the decoration of this fine hall. The plans themselves explain the general arrangements.

The elevations show the influence of the French school in which the architects were, I understand, brought up; they are not over-elaborated with features, but treated with a broad simple dignity which promises well for the ultimate result. The interior is more freely treated in spite of the request for simplicity, but as Messrs. Carrère and Hastings are noted among American architects for the purity and classicality of their detail, as well as their strong sense of proportion, they may be safely trusted to make this new library not the least architecturally notable among a very notable group of buildings.

Gentlemen, I fear I may have occupied so much of the evening that you will hardly thank me for leaving so little for the important matters of administrative detail on which Mr. Burgoyne has to address you, but I trust the comprehensiveness of the subject may be some excuse, and particularly since it gave me the opportunity of bringing before you what others are doing besides ourselves. I venture to hope these American works are not without their lessons for us in more senses than one, and not only as libraries, but as public buildings *per se*. Here we are in the most opulent city in the world, under an ancient Corporation and an ambitious County Council, in the midst of parishes as large and some of them as wealthy as many well-known cities. We are in a country abounding with great municipalities, rich in tradition and active in all honourable enterprise; and yet do not these libraries, built, as the inscription at Boston tells us, under the conviction that "The commonwealth requires the education of the people as the safeguard of order and liberty," give us pause; and these public buildings, "founded through the munificence and public spirit of citizens" of no mean cities, speak to us in tones the significance of which cannot be mistaken? Are we above taking lessons from our vigorous offspring in the West? If not, would that some of the public spirit and the love of art which animate the founders and designers of such works as these could by some occult process be transferred to the hearts of the City Fathers of London and our great provincial towns! What might there not be accomplished for the arts and letters of our country! If the brilliant examples set by New England could but stir the ambition of Old England to go and do likewise, one might be tempted in the matter of public libraries and other cognate structures to join in the conclusion of the writer I have already quoted, when he says:—

"What the present has been to the humble beginnings of half a century ago, so shall

the end of the next fifty years see an institution so robust, so progressive, so powerful in influence, that its possibilities can be prefigured only in the mind of the veriest dreamer of to-day."

## II.—PLANNING AND FITTING. By F. J. Burgoyne.

In considering the design of a suitable building for a municipal public library, it is important to remember that the income of the library is limited to the proceeds of a rate of one penny in the pound, on the rateable value of the district concerned. There are, however, a few exceptions to this rule. Some half-dozen towns have obtained parliamentary powers to levy a higher rate, but in only one case (Wigan) does it reach twopence, and speaking generally, three-halfpence in the pound may be said to be the outside limit. *Per contra*, a few districts and towns have not levied the full penny, but are content with a halfpenny or three-farthing rate. Amongst these may be mentioned the London parishes of Kensington, St. George's Hanover Square, Hammersmith, and Shoreditch; and country towns like Portsmouth, Ashton, and Rochdale. The proceeds of the rate vary in amount from about £19,000 per annum in Manchester to £15 in Drumoak, a little Scotch village which characteristically considers a halfpenny rate sufficient for its needs.

My reason for mentioning the limited income of the library is that in this respect it is different from nearly all other municipal institutions. If you are called upon to design a workhouse, a town hall, or a fever hospital, the amount to be spent upon the building can be settled without considering whether it can be raised by a given rate. A building to fulfil certain requirements is needed, and your instructions will be to design such a building, at a cost not to exceed a stated sum. With the library it is different, and you should have some idea of the probable income before designing, so that too great a proportion of it shall not be expended in interest and repayment of loans for site, building, and furniture. There are many instances of libraries crippled in their work, through ways and means not having been sufficiently considered at their inception. I may mention one case in illustration of my point. The parish of St. Mary, Newington, borrowed for its building and site the sum of £16,900. The income from the penny rate at the time was about £1,750, and the yearly payment for interest and part principal amounted to £1,140, leaving a balance of but £610 to work the institution, for payment of salaries, and to provide new books, newspapers, and binding. I think you will agree with me when I express the opinion that the initial charges for buildings and sites should be paid out of the general rates, and that the whole proceeds of the penny rate ought to be available for the current work of the library.

It may be said that a consideration of the libraries finance has but little to do with the architect, as he is not responsible for the working of the library, and his interest ceases with the completion of the building; but I am sure it will be conceded that the plan of the building should be considered, not only in relation to the public, but also to the probable size of the staff which the income will allow to be engaged, to run the place.

For the purposes of my paper I will roughly divide municipal libraries into three kinds: small, medium, and large. Let us first consider the minimum accommodation which a small library may reasonably be expected to provide. It should have a place for the reading of newspapers and periodicals, and a lending department for the loan of books for home reading. The staff of such a library will probably consist of a librarian and a lad. The librarian's duties will be multifarious. He will in turn be caretaker, librarian, stoker, and on occasion, "chucker out." It is absolutely necessary, therefore, that his usual position should be some

place where he can readily supervise the whole of the building. The spot which experience has proved to be the best is the issue desk or the counter of the lending department. The plan generally adopted for such a building is a rectangular room, lit chiefly from the top. The newspaper stands and tables are in the centre. The walls on one, two, or three sides are shelved for books—often to a height of fifteen to eighteen feet—and a counter or rail runs around the room at a distance of six or eight feet from the books.

My objections to this type of building may be briefly summarised. The noise incident to the work of the lending department disturbs the attention of the readers at the newspaper stands and tables, and the librarian, who is often on duty for ten hours daily, has to breathe the vitiated air, respired by the not always too clean frequenters of the news-room. The lending department in most small places is closed one afternoon, or one day per week, and it is impossible to secure the books during the temporary absence of the person in charge.

The Pretoria Library, which occupies an area of some seventy by fifty feet, is arranged somewhat differently. The entrance is at one side, and the lending department is separated by glass screens from the news-room, so that it may be locked up. There are separate rooms for the magazines and for the study of the books of reference. The supervision from the lending library through the glass screens is perfect, and the librarian can without trouble visit any part of the building.

Let us now turn our attention to buildings of the second class, which I have designated "medium," and are such as would be expected in towns or parishes of about fifty thousand inhabitants. Here the staff will be somewhat larger, and the police duty which fell upon the librarian of the smaller library will generally be transferred to a porter on duty in uniform during the busiest hours of the day, and so the necessity for supervision of the whole building by one person from one point is not quite so pressing.

The public accommodation provided will be increased by the provision of books of reference for reading upon the premises, and these require a quiet room for their study. This is generally obtained by providing a room for the dual purpose of reading the higher class magazines and reviews, and works of reference. If the public rooms are all on one floor, the reference books will be shelved alongside those forming the lending department. If on two floors, the reference department should be placed upstairs, and the lending and general news-room on the ground floor.

This is again the minimum accommodation, but many libraries provide rooms for other purposes, such as separate reading-rooms for women and for children, a lecture-hall, and a museum and art gallery. All of these are laudable and useful, provided the income of the institution is sufficiently large for its proper upkeep; but it seems to me the height of folly to attempt more work than can be efficiently performed with the limited rate available. Better far is it to do the legitimate library work well than to starve it by wasting money on lectures by local gasbags on subjects such as "My Summer Holidays in Devon," or "Our Local Poets and their Works;" or providing a museum in which we see such specimens as "an extraordinary stone, weighing 2¾lb., taken from his worship the Mayor's horse 'Sandy';" or an art gallery whose chief attractions are a series of portraits of aldermen and town councillors, in cocked hats and violet gowns, painted by local artists.*

The third class—the larger municipal libraries—suitable for towns of 150,000 inhabitants

* Of libraries of small and medium size, plans of the following were shown: The Wandsworth Library, designed by Mr. H. Branch; the Croydon Library, designed by Mr. C. Henman; the Victoria Institute, Worcester, designed by Messrs. Simpson and Allen; the West Ham Central Library, designed by Messrs. Gibson and Russell; the Edward Pease Library, Darlington, designed by Mr. Gordon Hoskings; the Tate Public Library at Streatham and the Tate Central Library at Brixton, both from Mr. S. R. J. Smith's designs; the new Library at Westminster, designed by Mr. F. J. Smith; the Sale Public Library, designed by Mr. R. J. McBeath, and the Bootle Library.

and upwards, I will not say much about, as Mr. Brydon has described to you some buildings of that type. I may say, however, that in these larger towns, the work done in the reference department is of the most valuable character, and it is advisable to have, in addition to the ordinary reference reading-room, a smaller room for the use of students of special subjects, or those who are engaged upon original research. For instance, in my own library I have had to accommodate readers who have brought collections of shells and of lepidoptera to our reference library, in order to name them; and a student of microscopy, who brought his instruments for the purpose of comparing certain bacteria of his own breeding with those figured in the *Journal of the Royal Microscopical Society*.

I have so far spoken entirely about the rooms used by the public, but the working side of the library also requires your careful consideration. The librarian will require a room for his own use, which in the smaller libraries should be adjoining the lending department. In the larger buildings his office will be better situated in conjunction with the reference department. It should be of considerable size, for in many cases it will be used also for the monthly meetings of his committee. It is by no means necessary that the public should have direct access to it; if they have, he will be worried about trivial matters, such as "There is a boy in the news-room eating nuts," which could easily be dealt with by one of his subordinates. Generally the room will be shelved for the reception of books on bibliography, catalogues, and the other working tools of the librarian. In large libraries there should be a fireproof strong-room, on the same floor as the reference department, in which the rarer books and manuscripts can be stored, and rooms for repairs and binding on the premises. Mess-rooms for the staff are necessary, and if the employees are of both sexes, suitable lavatory arrangements for each. In most of the London libraries a residence for the librarian is included in the building. This is economical, as the cost to the committee of such an addition is less than the value of it to the librarian—or, in other words, the extra salary which would have to be paid to the officer, if his residence were not provided, would be more than the interest on the extra cost of the building. One thing, however, should be guarded against. The house portion should not have direct communication with the library. If it has, the taxing authorities, who have no regard for your limited income, will charge the library with inhabited house duty upon the whole value of the building, instead of upon the house portion only.

Before planning a building, a clear idea of the method of work to be employed should be obtained from the librarian. In lending-library work, for instance, there are three methods of issue, viz. with an indicator, without an indicator, and "open access," or allowing the readers to go to the shelves and select their books. In each case the arrangement of the room and the space required are different. If an indicator is used, a counter not more than 2 feet 9 inches in height must be provided, with a good light on both sides of it. The indicator in most general use is the "Cotgreave," and it takes fifteen inches for the display of each 1,000 numbers. The counter must be long enough to take indicators for future additions, as well as show-cases with glass fronts for the display of the newer books. In large libraries it is best to break the indicators up into blocks of 3,000 and separate them by a show case or issue desk, so as to distribute the persons consulting it. Where no indicator is used, and the librarian takes each reader's list and looks for the books, a different height of counter is advisable. For the "open access" system a central enclosure for the librarian is necessary, with inlet gate at one side and outlet at the other. The shelving must be at a minimum distance apart of five feet, and none of it higher than can be reached by a person of short stature.

A very general fault in lending libraries is the inadequacy of the space for the public. In my own library the counter is 52 feet long, and the readers' space is 352 square feet. This is not sufficient. From actual count I find that on Saturday night, between 6.30 and 8.30,

our busiest time, we often have an issue of 600 volumes, and I have counted 212 persons in at one time. With the open-access system much the same experience is recorded. The librarian at Croydon estimates that the number of persons served on a Saturday night between 7 and 9 is about 350; when busy there will be 60 to 70 people in the library at a given time, and when busiest about 100.

In shelving the books in the lending department it is of the utmost importance to place them as near to the issue desk as possible, in order that quickness of issue may be facilitated. Remember that if the shelving is only three feet further away from the issue desk than necessary, and 1,000 volumes are issued in a day, the assistants have to walk 6,000 feet, or over a mile, more than they need do. In the larger libraries the growth of the stock of the lending department will not be so great as in the reference department, and so less room is required for future additions. This is in consequence of the greater wear and tear of the lending-library books, and of the ephemeral character of many of them. At the present time there are many lady novelists, of each of whose works a library might buy 100 copies and still not satisfy the demand. In a dozen years their vogue will have departed, and their place be filled by others. In the Tate Central Library I find that I have withdrawn 2,500 volumes in six years, from an average stock of 13,000, and in future years this proportion will increase. It is hardly necessary in any but the largest libraries to provide room for more than 25,000 volumes in the lending department.

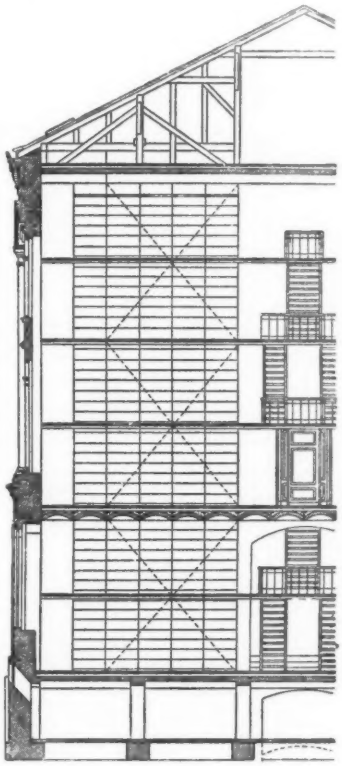


FIG. 1.

The shelving of the reference books also requires consideration. In some places it will be desired to have the books in the same room as the reader, as in the Guildhall Library. In others it will be thought best to shelve the bulk of them in a store-room, adjacent to the reading-room. My own predilections are for the latter course. In any case considerable room must be allowed for the growth in this department, a moderate calculation being that in the larger libraries the stock will increase threefold in twenty-one years. How to cope with this enormous accretion is a question deserving careful attention. It seems to me that the adoption of the American "stack system" of packing the books, combined with rolling bookcases for the works in least demand, is the ultimate solution of the problem. This system of stacking, or rather warehousing, the books consists of a series of bookcases with shelving on both sides, arranged at a minimum distance of three feet from each other. The cases are about seven feet in height, and generally have a hammered glass or open-ironwork floor. Another tier of similar cases is superimposed, and another on top of that one. In the new library building at the Capitol, Washington, where ample side light is obtainable, nine floors, each seven feet in height, are built. If top light only is available, two, or at the most three, floors only can be used, but with electric lighting of each tier, or good side lights, a larger number. The floor of the reading-room should, if possible, be arranged to be placed about the level of the centre floor of the stack, so that the attendants will have a minimum number of stairs to ascend or descend. Fig. 1 is a section through half of the

stack-room of the University Library at Grieswald. You will note that the stack is six tiers in height, and that the reading-room floor is placed between the second and third from the bottom. A sub-basement is underneath for dryness, and the communicating stairs are in the centre of the stack lit by a skylight. There is no skylight over the books, for fear of damage by rain leaking through. The stack-room of the University Library at Halle is four tiers in height, and lit entirely by side windows, 3 metres wide, with wall space between each of 1½ metre.

The Imperial Library at Strassburg furnishes a typical illustration of the general arrangement of a large library built upon this system. The reading-room occupies the centre of the building, and is surrounded by the large stack-rooms on three sides; these are connected by three shorter rooms arranged in the fashion of a Greek cross, with courts for light between the arms. The great stacks are eight tiers in height, and the connecting arms five. The front of the building is used for the official and the administrative work of the library. The shelf capacity of the building is about a million volumes, and the present stock 700,000.

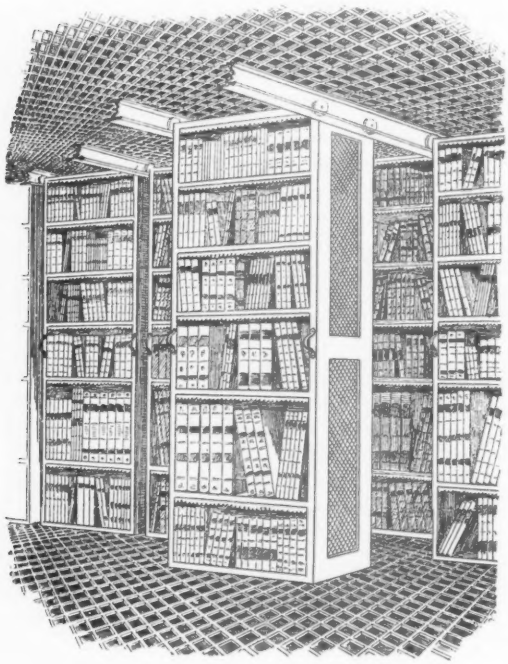


FIG. 2.

The stack-rooms at the British Museum will no doubt be well known to you, but I would like to call your attention to a new system of sliding presses in use therein. The stacks are three tiers in height and an average of about nine feet apart. In front of each bookcase a couple of steel girders with flanges are bolted to the iron floor above, at a distance of about thirty-six inches from each other, and at right angles to the case. From these girders hangs a bookcase of the same width, to within a few inches of the floor. It can be filled with books, and is readily pulled away from its normal position, which is close against the front of the fixed bookcase. The weight of hanging case when full of books averages about 10 cwt. A valuable feature of this invention is that it can be adopted piecemeal, as the necessity arises for greater accommodation in any particular section of the library. Fig. 2 is a drawing of the sliding press.

A somewhat similar system, invented by Mr. W. Lambert, and manufactured by Messrs. Lucy and Co., of Oxford, has been adopted in the newly rearranged library of the India Office. The iron bookcases hang from girders as at the British Museum, but they are packed close together, and if a book is wanted the case containing it is pulled out into the central gangway, which is of the same width as the sliding case. This is the closest method of shelving a large number of books that I know of, and will be very useful in libraries where the books are not much in use, and require to be warehoused rather than displayed. The cases average 3 feet 6 inches in length, and 8 feet 8 inches high. They have eight shelves on either side, and will

carry 600 ordinary octavo volumes. The weight of the case when empty is about 3½ cwt., and if filled with books about 1,300 lb.

Whatever system of shelving is adopted, it is important to make all the shelves of the same length. Experience has shown that thirty-six inches is the most suitable. No bookcase should be higher than eight feet, and seven feet is preferable. With the latter height it is possible to reach a book from the top shelf without the use of a ladder or stool.

In bringing this somewhat discursive paper to a close, I am conscious of having left out many things that would have been of interest to hear discussed. There is, for instance, the great question of how to ventilate without a draught, which I fear would take an evening of itself to properly consider. The most suitable kind of decoration for the interior of a library is another question of interest, and would open up a large field of profitable discussion.

In conclusion, I thank you for the opportunity of addressing you upon a subject of so much interest to myself.

## DISCUSSION OF THE FOREGOING PAPERS.

Professor AITCHISON, R.A., *President*, in the Chair.

MR. F. PACY (Hon. Secretary of the Library Association) thought that librarians might congratulate themselves if architects could be induced to see that there was a field for the exercise of the highest part of their art in connection with libraries. Nothing could be more fatal to the success of a public library than to neglect its attractiveness to those privileged to use it. If the library were a shabby, ill-constructed building, in an out-of-the-way place, it was almost certain to be a failure; if, on the other hand, the building were well constructed, and had bright, cheerful, and well-ventilated rooms, its prospects of success and usefulness would at the outset be assured. It had been pointed out that the ideal position was to have all the departments on the ground floor; but that was not always obtainable. On the question of the storage of books he did not agree with Mr. Burgoyne that it was better to have a storage room apart from the reading-room. His feeling as a librarian—and he thought he should have the sympathies of all who used libraries as such—was to show the treasures that the library possessed round the walls of the room—and, with all deference to great painters and sculptors, there was, he thought, no better furniture for a library than books; there was nothing that gave a greater air of comfort or attractiveness, or that led so much to the feeling referred to by Mr. Brydon, that one remained there with pleasure and left with regret. Mr. Brydon had touched on many points, but there was one thing that had not been mentioned which it had often struck him that architects might give attention to. In the warming of the buildings by hot water or by steam, radiators and pipes were almost invariably placed against the walls. But one did not get the warmth—radiators and pipes were covered over with bookshelves, and the dirt penetrated the shelves and disfigured and deteriorated the books. If architects placed the warming arrangements in the centre of the rooms it would be a great gain, and would remove a blot which marred many of the libraries in this country. The supervision of the library was of course a very important point; but the idea that the librarian and his staff must be in the centre of everything and see all that was going on around was often carried out to their great disadvantage from a health point of view, by reason of the vitiated atmosphere they were compelled to breathe. With regard to the decoration of the buildings, he thought that in their smoke-laden atmosphere more might be done in the use of tiles or marble or washable materials; they would thus avoid the necessity for the constant closing of these institutions for periodical cleaning and redecoration. Much inconvenience, expense, and annoyance would be saved by this means. He had listened to Mr. Brydon's paper with the greatest pleasure. He had seen some of the drawings and plans and photographs of the American libraries for the first time, although he had had the privilege last year, in common with some of his brother librarians, of hearing Dr. Billings, the Director of the New York Library, give his ideas of the working of a splendid plan of library arrangement. He sympathised with Mr. Brydon's peroration. It was a remarkable thing that this country, which had a literature as old as its history, should have so neglected those palaces, as they ought to be, of learning, of which such splendid examples existed on the other side of the Atlantic, where their literature was comparatively new. No doubt the American millionaires had largely aided their fellow-countrymen in this matter; and if the wealthy people here would come forward in the same manner, no better field existed for their liberality

than the establishment of libraries for the public good, which would, moreover, encourage two professions, that of the architect and that of the librarian.

MR. J. H. QUINN (Librarian of the Public Libraries, Chelsea) said that if he could get the architects quietly in a corner he should advise them to take care to add to the bill for extras. In Chelsea the Library had been up so long that there was no harm in confessing now that they had scamped the work too much, and cut Mr. Brydon down in his plans, and also in his elevation, to such an extent that they now found to their cost that they already wanted the room then cut out. The committee had not finished with Mr. Brydon twelve months before they had cause to regret that they had cut him down so much. It did not fall to the lot of a parish or a municipality to build a library every year, and it was a great mistake for the authorities to scamp the work and cut down their buildings, as they so often did. He differed from Mr. Burgoyne as to the rate at which books grew in libraries. They were enabled to weed their stock a little, but not so much as they could wish; because a book that was withdrawn one day was sure to be asked for the next. In Chelsea, whereas in 1891 they had 10,000 books, they now had 27,000. At that rate they would soon have filled Mr. Brydon's building. Happily they had some spare ground at the back, and he hoped Mr. Brydon would be living when the time came to build an extension. The selection of the site was a very important question, but one which did not always fall to the architect—it was more a matter for the Library authorities; but it was very necessary to keep some room for extension.

MR. H. HEATHCOTE STATHAM [*F.*] said he should like to propose a vote of thanks to Mr. Brydon and Mr. Burgoyne for their very interesting Papers. Mr. Brydon had cheered their spirits by bringing before them various examples from America of how libraries may afford scope for not only useful but beautiful architecture; and Mr. Burgoyne had shown them that the business of a librarian did not deaden the sense of humour. Mr. Brydon had mentioned a library in which all the windows were closed and air-tight, so as to prevent the entrance of dust; and he said that of course the ventilation was supplied by other means. But if the windows were closed to prevent dust coming in through the natural air, what was to prevent its coming in through the ventilators? and if the air were forced through a number of tubes which were difficult to get at, it seemed extremely probable that more dust would get in in that way than through the ordinary windows. With regard to the Liverpool Library, that, he was afraid, was one example where architectural considerations took the place of utilitarian considerations. The circular library was built partly as a monument to Sir James Picton, and it was a very ingenious way of connecting two buildings which were already built placed at different angles; the circle between, with its colonnade round, forming a happy architectural group; but they found when it was built that almost every whisper could be heard in the room. That would not necessarily be the case if the scale were larger, because in the British Museum Reading Room, although a good deal of talking went on there which should not, he did not know that it echoed at all. But he had been assured that it was a most serious drawback to the circular reading-room at Liverpool; and that was a point to remember, that it was almost impossible to avoid hearing every sound in the room. One matter for consideration was as to the materials to be used for reading-rooms. Generally the floor was laid with something to prevent the noise of the feet; but that made it difficult to keep the room clean. It would be almost better to lay down merely strips of material to walk upon which could be easily taken up, and the floor regularly washed. A friend of his had remarked on the size of the "Reading Room flea" at the British Museum. This, he suggested, might be kept out altogether if there were a washable floor. A very ingenious suggestion had been made by a member of the Institute, Mr. W. M. Fawcett, many years ago, and there was an illustration of it in the *Athenæum*, a paper which did not generally give illustrations. It was a proposition for a library that could be increased *ad infinitum*. The idea was to commence simply with a circle, which was to be added to in a spiral, with cross doors connecting the galleries, so that as the books increased one could go on building the spiral for ever. He believed nothing was ever done with it practically, but it struck him as an exceedingly ingenious idea for the indefinite extension of a library.

MR. BERESFORD PITE [*F.*], seconding the vote of thanks, referred to the Rylands Library at Manchester, which he had recently seen; it was certainly the most elaborate and costly building of this sort that had ever been erected in England. It rather baffled description; it was so entirely unexpected, one might also say so entirely exotic—a gorgeous fifteenth-century vaulted hall covered with elaborate tracery, deep bays vaulted in stone, with elaborate traceried windows, traceried corridors, the minimum of daylight, and the external air absolutely excluded. Mr. Basil Champneys some time ago, at a meeting of the Architectural Association Class of Design on the subject of Libraries, explained the system by which the external air was excluded, it being admitted only through a ventilating trunk, in which it was washed, fanned, purified, and cleaned before it was allowed to come near the interior of the building. This would probably explain the point referred to by Mr. Statham; the system of ventilation was on the same principle as

that in operation at the House of Commons. There seemed to be a difference required between the architectural treatment of the modern stuffing machine (this reading by the assistance of a penny rate), and the comfortable homelike charm one liked to associate with the reading of a good book even in one's own study or library, or in the library hall of a college—the two ideas must be dealt with in a different way. The practical suggestion made by one of their librarian visitors as to the use of glazed or other impermeable material quite agreed with that idea. As to ornament and decoration, in crowded and stuffy rooms in which people devoted their attention to books, and books only, one was little inclined to embark on architectural fancies. But a librarian who was willing to confine his decorative wants to books confined it to about 7 feet 9 inches above the floor, and the space above that must be left to whitewash and imagination. The hall and the staircase and the external elevation were the only parts available to the architect in an ordinary public library. He could not say that architects had made much use of it, for there were very few public libraries in London that could be referred to with any comfort or happiness, as the architects seemed to be altogether at sea, using up details originally designed for board schools or public baths and washhouses, and other useful buildings of the vestry type, with the most illiterate kind of effect—something unhappy, unpoetic, and unspeakable. If public libraries supported by the rates had been plain as workhouses, it would, he thought, be of benefit to the City in which we unhappily live.

Mr. BRYDON, in reply, said that the point raised by Mr. Statham about ventilation had been answered by Mr. Pite. In the Congressional Library at Washington, the air was so purified that it was practically free from dust, and the windows were kept closed on purpose to prevent dust getting upon the books. He should like to say that the Institute was especially indebted to those American architects and others who had so cordially sent the drawings exhibited upon the walls; they had sent them with the kindest possible expression of goodwill to the Institute and to those who would be present at the reading of the Papers. His request for illustrations and particulars had been responded to in the most fraternal manner, and with appreciation of the opportunity of showing to British architects the work that had been done in America. He would therefore move a very cordial vote of thanks to them for their kindness in sending the illustrations for their inspection.

Mr. Burgoyne having briefly responded, Mr. Brydon's motion was put from the chair and carried by acclamation.

Mr. Sidney R. J. Smith [*F.*] sends the following note:—

I should like to add a few remarks on the subject of the Papers. It is most desirable that rooms should not form passage ways to other rooms or parts of the building. In a recent competition in which I was assessor this was a very common fault. In most designs I also consider that the lending library should be central, so as to control, as far as possible, all parts of the building, and that the librarian himself should not be made an inspector of the public rooms in any way. It is also absolutely essential, if an indicator is used, to have ample light on it. I have seen a library in the North of England, recently built, where the light was on the back, not the front, of the indicator, and I suggested to the librarian that instead of burning the electric light all day, as he was doing, a reflector should be placed at a suitable angle to throw the light from the back windows on to the front of the indicator. Of course all are aware that in many libraries there is no indicator, but the public are allowed to take whatever books they please, and are admitted to this book store through a turnstile. This seems to work very well indeed, and books are seldom, if ever, lost.

The advantage of having glazed tiles or bricks as dadoes to all public parts cannot be overestimated. The wear-and-tear on libraries is greater than on any other public building, and walls get greatly damaged in even a few months. I wish to support the vote of thanks to Mr. Burgoyne, with whom I have worked for some years. I think I am correct in saying that he and I practically carried out the first public library in London (at Norwood), on which all recent libraries have been based. I should also like to support the vote of thanks to Mr. Brydon, for I consider he has mastered the subject in a most thorough manner, and his library at Chelsea is certainly one of the best, if not the best, in London, both as regards plan and architecture. I regret I am called away to the country, as I should like to have been present and said more on the subject than I can express in a short note.

## THE ARCHITECTURAL ASSOCIATION SKETCH-BOOK.

THE subscribers to this unique publication seldom fail to express their appreciation of it, either to the editors or one or other of the members of the Sketch-book Committee, and these officials are thus encouraged and stimulated in their endeavour to still further enhance the value of the work in which they are so keenly interested. The conjecture that a "sketch-book" is of necessity no more than a mere haphazard conglomeration of nebulous scraps and pretty jottings culled from the brief holiday pocket note-book, with an interest purely ephemeral save to our individual selves, is an obvious fallacy if it be directed towards the *A. A. Sketch-book*. This publication proclaims on each of its varied sheets the solid and complete records which it affords of our ancient and too often fast decaying buildings, and its importance on this account alone is of inestimable value to all students of architecture and archæology alike. In addition, it has another and a still more widely diffused significance. As a chronicle of progress both in the methods of draughtsmanship and in the processes for the reproduction of drawings, each successive volume affords an ample and yet withal concise history. Both the measured drawings and the sketches, moreover, are presented in a manner so fascinating that they are no less attractive to those whose pursuits do not of necessity compel an intimate acquaintance with such details.

From its earliest days the committee of the *A. A. Sketch-book* has fostered a laudable spirit of cosmopolitanism in its tendencies, and, moreover, it is a body both progressive and ambitious. Its axioms have always been, first, to select the best possible subjects, irrespective of transient architectural fashions; secondly, to obtain the best possible drawings of such subjects; and, thirdly, to reproduce these drawings by the best possible means at its disposal. That the committee is insatiable in its ambition for the continual improvement of the publication is evidenced by the enthusiastic suggestions which are constantly brought forward for discussion; but though the *Sketch-book* has neither dividends to earn nor profits to make (and herein is advantageously placed as compared with other publications), yet of necessity improvements can only become possible by means of a constant, permanent, and increased circulation. On the other hand, there is no desire to attain such a number of subscribers that the intrinsic value of this publication might be injured, and, as heretofore, the committee is still determined to limit the edition to 400 copies. At the present time, from causes such as those which affect all societies, there are some vacancies for new subscribers, and, as a commencement is about to be made with a new volume, it has been thought desirable that the attention of the members of the Royal Institute and others might be drawn to the list of contents, which, by the courtesy of the Institute authorities, is inserted below. As will be seen, the list of subjects to be illustrated in the forthcoming parts are, as usual, most comprehensive in character, and the names of the contributors of the various plates are a more than sufficient guarantee for the quality of the drawings themselves. Moreover, it is not perhaps so widely known as it might be that by contributions of suitable plates subscribers may become entitled to a considerable rebatement, or even a complete elimination, of their nominal subscriptions of one guinea per volume of seventy-two plates, all of which are reproduced in a manner which cannot be surpassed.

Henceforth the *A. A. Sketch-book* will make its appearance regularly at quarterly intervals, each containing monthly parts, so that the twelve parts, forming a complete volume, will be brought out annually.

In view of the reawakened interest which is now being taken in colour decoration generally, the able editors of the *Sketch-book*, Messrs. W. G. B. Lewis and W. A. Pite, feel it imperative to indulge in more colour plates than heretofore; but the possibility of such a desirable end being attained rests, of course, not with the editors or committee or the other officials of the publication, but solely depends on the possibility of obtaining a full roll of subscribers.

In the libraries both of the Royal Institute and the Architectural Association may be seen the well-thumbed copies of the current numbers, which testify with a vast eloquence to its worth and utility to students of all ages, and the esteem in which they hold the *A. A. Sketch-book*.

R. S. BALFOUR.

*Contents of the A.A. Sketch-book, Vol. IV.*

*Part* 1.

Corsham Almshouses. Master's Desk (W. Haywood).
Blackheath Morden College. Organ Loft (J. G. N. Clift).
Lacock Abbey. View and Details (W. Haywood).
Montacute. View along E. Front (W. Haywood).

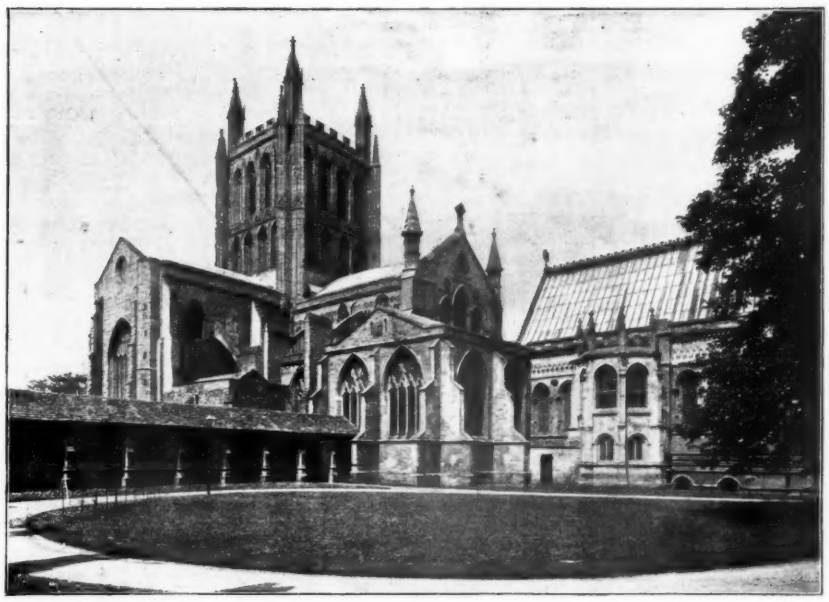
*Part* 2.

Heckington Church. Easter Sepulchre (A. B. Pite).
Reindeer Inn. Plan and Ceiling, Window, Chimney-piece and Details (John Stewart).
Fairford Church. Screens (John Stewart).

*Part* 3.

Clare College, Cambridge. Plan, River and Street Fronts, S.E. and W. side Quad (T. Tyrwhitt).
Wraxell Manor. Fireplace (W. Haywood).
Abingdon Church. Candelabrum (John Stewart).
Granada. Charles V. Palace Elev. (A. T. Bolton).

Particulars and subscription-forms can be obtained of Edgar H. Selby, Hon. Sec. *A.A.S.-B.*, 8 Buckingham Street, Strand, W.C., or at the office of the Architectural Association.



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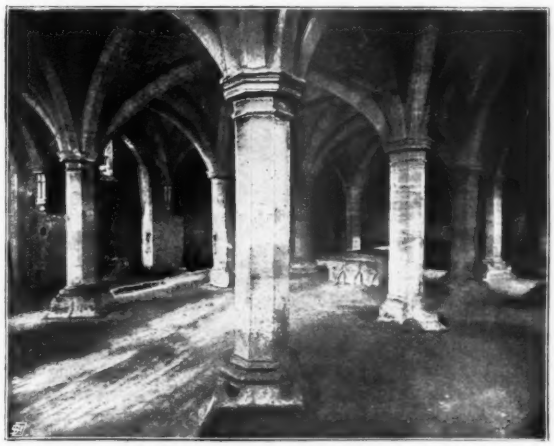
HEREFORD CATHEDRAL, FROM THE SOUTH-EAST.

## HEREFORD CATHEDRAL.

*The Cathedral Church of Hereford: A Description of its Fabric, and a brief History of the Episcopal See. By A. Hugh Fisher.* 8o. *Lond.* 1898. *Price* 1s. 6d. [*Messrs. George Bell & Sons, York Street, Covent Garden, W.C.*]

In a little over a hundred pages Mr. Fisher has given a concise account of the interesting Cathedral Church of Hereford and a short history of its See. Although one of the smaller cathedrals, Hereford is a building of great architectural interest, and all styles from Norman to Perpendicular are well represented. Like nearly all our cathedrals, it has been since the Norman period considerably lengthened eastward, but its ground plan has preserved perhaps to an unusual extent its Norman form, and the main walls of its presbytery are practically intact, and the sombre effect of this part of the church gives it a dignity lacking in larger buildings. The nave, although terribly mutilated by Wyatt after the fall of the western tower in 1786, has a rich Norman arcade, and the south transept is almost wholly of Norman date. The Early English period is well represented by the Lady Chapel, standing on a crypt, and somewhat extensively restored by Cottingham in the early forties. The north transept is early "Decorated," with a curious series of straight-sided arches, curious but hardly beautiful. To a later period belongs the sturdy central lantern, with its profusion of ball-flower ornament, somewhat resembling Salisbury in the arrangement of its belfry stage, and bearing strong evidence of having originally been



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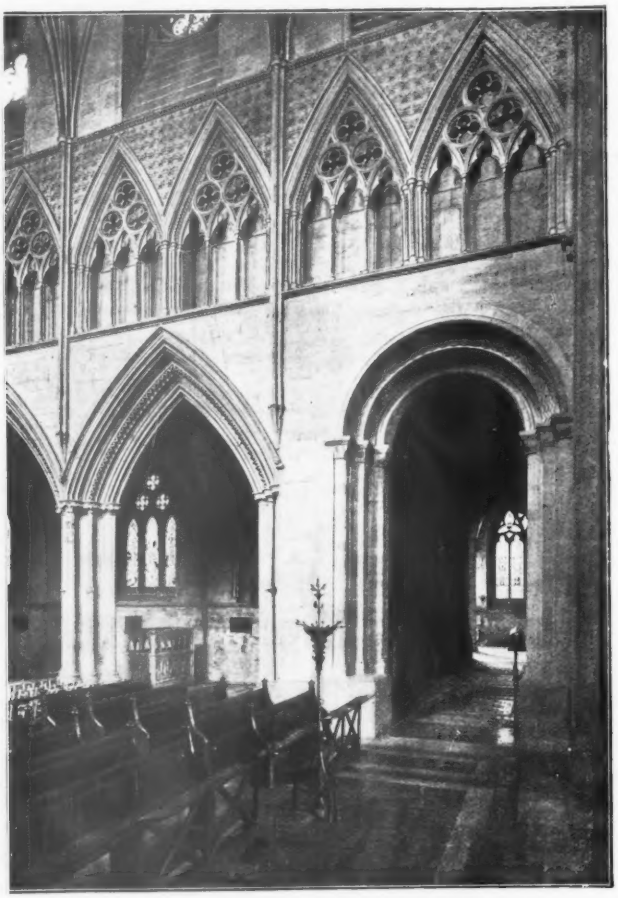
THE CRYPT, HEREFORD CATHEDRAL.

designed to carry a spire. A lofty spire covered with lead existed apparently until Wyatt's time, and the effect of the tower would be much improved by an addition of something on the same lines. There is less work of the Perpendicular period than of preceding styles; but of this date are the cloisters, the north or Bishop Booth's porch, the Stanbury Chapel north of the presbytery, and the other monuments, all of them with points of interest, and a large number of the greatest value. The beautiful Cantelupe shrine in the north transept, with its delicate Early English foliage, and series of small knightly effigies in its lower niches, and the neighbouring tomb of another of Hereford's bishops, Aquablanca, would in themselves make the cathedral noteworthy. Among



*Photochrom. Co. Ltd., Photo.*

NORTH TRANSEPT, HEREFORD CATHEDRAL.

richly decorated chantry of Bishop Audley on the south side of the Lady Chapel. The sacristy seems to have been extended at this period and alterations made to the south transept. The Chapter-house on the east side of the cloister is now in ruins. It was of Decorated date, a ten-sided polygon on plan. Hereford is particularly rich in monuments. There are in various parts of the building over fifty examples of effigies and others is the tomb of Bishop Stanbury, with good heraldic work on its north side, and the Bohun monuments on the north side of the Lady Chapel. In the south aisle is a valuable "map of the world," supposed to be of early fourteenth-century date, and very curious; and in the library are some interesting books, including a "Latin version of the four Gospels written in Anglo-Saxon characters," a manuscript, an ancient antiphonarium

containing an old "Hereford Use," two Caxtons, and "The Nuremburg Chronicle completed in 1473."

All the foregoing and many other points are clearly described in the little book before us, and are well illustrated by a series of excellent reproductions from photographs and old engravings. An old view from the north, facing page 22, shows the central spire and western tower as it existed at the end of the seventeenth century, and another on the preceding page, from a drawing by Hearne, well illustrates the havoc caused by the fall of the western tower. The photographs of the north porch, the north and south transept, and the crypt of the Lady Chapel may be noted among the large number of excellent illustrations. The letterpress has been divided into four chapters, dealing with the history of the building, the exterior, the interior, and a short account of the See. At the end is a ground-plan, which hardly seems worthy of the book. Its scale is large enough for the dates to have been shown and the principal monuments indicated, and it loses much by not having been more carefully prepared. Apart from this failing, the book can be recommended as a handy and well-written guide to one of our smaller but most interesting cathedral churches.

ROLAND W. PAUL.

## DISCOVERY OF RELICS OF BUDDHA.

*Archæological Survey, N.W.P. and Oudh Circle. Progress Report of the Epigraphical Section for the Working Season of* 1897-98. *From A. Führer, Ph.D., Archæological Surveyor, N.W.P. and Oudh.*

There are two *Reports* in this publication, but Dr. Führer's is by far the most important from its containing details of the discovery of some of the relics of Buddha. Multitudes of relics of Buddha are said to exist, and many are mentioned as having existed in former times—such as teeth, bones, nail-parings, hairs, &c.—but, so far as I can recollect at the moment, the relics that have lately turned up are the only ones that are authenticated by an inscription, and by an inscription which seems to be accepted as reliable by our best authorities on such matters. There are other conditions connected with the discovery which help to confirm this judgment.

It may perhaps be as well to describe here—although not given in the *Report*—some of the details of Buddha's death and cremation, for the benefit of those who may not chance to be familiar with them. The account is contained in an old Pali Sanskrit work entitled the *Mahâ-Parinibbâna-Sutta*, or "The Book of the Great Decease." This has been translated by Professor Rhys Davids, and is published in the *Sacred Books of the East*. According to this authority, Buddha died at Kusinârâ, or Kusinagara, as it is more generally written, where he was cremated; and eight kings or chiefs sent messengers to claim a portion of the relics. These were divided, and each of the eight messengers carried away a share to his own country, where stûpas, or monuments, were erected over them. Buddha belonged to the Sâkya tribe of Kapilavastu: from this tribe he derived one of the many titles he is known by, that is, Sâkya-mûni, or the "Wise Man of the Sâkyas." It is understood that the Sâkyas received some of the relics after the cremation, over which a stûpa was erected; and it is this monument, with its relics, which has lately been discovered; and their great importance, from the confirmation they give to the history of Buddha, is recognized by all who are familiar with the subject.

The sites of these old towns, like so many others in India, have long been lost. A little over twenty years ago Mr. A. C. L. Carlleyle, who was then on the staff of the Archæological Survey, believed he had discovered the site of Kapilavastu a little to the east of the town of Oude, on the Ghogra River.* Sir Alexander Cunningham, who was then at the head of the department, accepted the identification of the spot; but that, of course, must now be given up, as the inscriptions found on the newly discovered site seem to leave no doubt as to its being the real one.

The site of Kapilavastu which has been lately discovered is on the Nepal frontier, and may be briefly described as nearly direct north from the town of Gorakhpur, a place that will be found on most maps of India. There are mounds extending from east to west for several miles, and under these mounds are the remains of the old city. It was at a place called Padariâ, situated among these mounds, and about five miles within the Nepal territory, that the lower part of a Buddhist Lat,† or stone pillar, was found. The broken portion has not yet been discovered, but the part that remains is evidently on the site where it was first erected.

Towards the base of this Lat is the following inscription: "King Piyadasi, beloved of the gods, having been anointed twenty years, came himself and worshipped. 'Here Buddha-Sâkyamuni was born.' And he caused to be made a stone [slab] bearing a big sun; and he caused a stone pillar to be put up, because here the Worshipful One was born. The village of Lummini has been made free of taxes, and a recipient of wealth." It is probable that this translation is not a perfect rendering of the Sanskrit, for I have seen more than one version of it; but it at least conveys the main facts. In the history of Buddha it is stated that he was born at Kapilavastu, in the Lumbini Garden. King Piyadasi, also known as Asoka, is here stated to have visited the spot

* See *Archæological Survey of India: Report*, 1874-1875 and 1875-76, vol. xii.

† "Lat" means a "walking-stick," to which these long pillars have a resemblance.

where "the Worshipful One was born;" and the name Lumbini is so close upon that of "Lummini" that they may safely be taken to mean the same place. Asoka reigned about the middle of the third century B.C., and at that date the site of Kapilavastu could not have been lost. It ought also to be mentioned that the Sanskrit characters of the inscription are accepted as being those of Asoka's period. This discovery of the site of Kapilavastu and the Lumbini Garden will most probably be looked upon as of far greater historic interest than even the finding of Buddha's relics.

The clue to this historical spot was the previous discovery at the village of Gotihiva—one account

ASOKA PILLAR AT PADARIÁ, MARKING SITE OF LUMBINI GARDEN, BUDDHA'S BIRTHPLACE, NEPAL TERAI.

calls it the village of Niglīva—of a stûpa and the lower part of a pillar with an Asoka inscription, of which the following is a partial translation: "When the God-beloved King Piyadasi had been anointed fourteen years, he increased the Stûpa of Buddha Konākāmana for the second time; and when he had been anointed . . . years, he himself came and worshipped it, and he caused it to obtain. . . ." This Stûpa of Konākāmana, or Kanaka-muni—one of the three Buddhas that appeared before Buddha Sākya-muni—is mentioned by Hiuen Tsiang, the Chinese pilgrim, with its distance and direction from the Lumbini Garden; and it thus became a finger-post to the explorers. The discovery of this monument is also of some historical interest from its bearing on the question as to how far the Buddhism of Sākya-muni was an original system, or only the continuation of a previous form of Buddhism that had existed from a remote period in India.

The increasing of the stûpa, mentioned in the inscription, is a process that has been noted before. This was done by building all round the structure, that is, encasing it with a new surface, and thus increasing its size and importance. This

PILLAR OF KANAKA-MUNI, WITH ASOKA INSCRIPTION, AT GOTIHIVA, NEPAL TERAI.

would only be done with shrines that had a great sanctity such as this, which was believed to be that of a former Buddha. According to the inscription, Asoka had twice repeated this operation.

These sites were all within the Nepal territory, but the stûpa containing the relics of Buddha is about half a mile within the British frontier. This is near to the village of Piprâva, in the Birdpur Estate, in the north of the Basti District, where a large mound exists on one of these estates, belonging to W. C. and G. Peppé. Mr. W. C. Peppé, being a trained engineer and surveyor, was led, from the finds already described, to make explorations on this mound, which

MOUND OF BUDDHA'S RELIC STÛPA AT PIPRÂVA, BASTI DISTRICT. SOUTH-WEST VIEW.

turned out to be the ruin of a stûpa. The relic-chamber appears to have been easily discovered. It was found to be a massive box formed of white sandstone, with a lid of the same material: its internal capacity was 4 feet 4 inches by 2 feet 8 inches and 2 feet $1\frac{1}{4}$ inch. In it were three vases of steatite, a small circular box of the same, and "an exquisitely finished casket of rock crystal." There were also the remains of a box, or casket, of fragrant red sandal-wood, but

CASKETS FOUND IN BUDDHA'S RELIC STÛPA.

in a very decayed state. In it "had been enshrined portions of the bone relics of Gautama Buddha, collected from his funeral pile," but they were also in a condition of very great decay. The largest of the steatite urns was 7 inches high, another was 6 inches, and the smallest was $5\frac{1}{5}$ inches. The rock crystal casket was $3\frac{1}{2}$ inches. The steatite, or soapstone, vases have been very carefully turned in a lathe, and resemble closely those that Cunningham found in the stûpas near to Sanchi.

The identification of the relics contained in these vases is derived from a Sanskrit inscription which

THE CASKET, WITH SANSKRIT INSCRIPTION AND RELICS, FOUND IN BUDDHA'S RELIC STÛPA.

goes round the upper portion of the smallest of the three steatite vases. This has been translated as follows: "This relic-shrine of divine Buddha [is the donation] of the Sâkya Sukiti brothers, associated with their sisters, sons, wives." The characters are as old at least as the time of Asoka; the late Dr. Bühler has suggested that they might be earlier; but, be that as it may, our best authorities appear to accept the inscription as satisfactory evidence that this was the stûpa built by the Sâkyas of Kapilavastu to enshrine the portion of relics they received after the cremation of Buddha at Kusinagara; and thus agreeing with the statements found in "The Book of the Great Decease."

A great many small articles were found mixed with the ashes, such as gems, pearls, beads, little objects in gold and silver, and figures of various kinds formed with gold leaf. These were no doubt intended to represent the "seven precious substances" which are often referred to in books as having been placed in stûpas.

A newspaper paragraph has lately announced that the relics of Buddha are to be presented to the King of Siam, who, it may be recollected, came here on a visit not long ago. To him, being a devout Buddhist, these precious objects will be particularly sacred, and it may be expected that he will erect a grand and suitable structure for their preservation. It will be an interesting point to know that a notable Buddhist temple or shrine is being built in our own time, and to learn what particular form and character it will assume. The celebrity of the relics will no doubt make the temple a place of pilgrimage which will be visited by Buddhists from all parts of the East.

In addition to Dr. Führer's *Report* on the explorations at Kapilavastu, there is a *Report* by Mr. Ed. W. Smith, M.R.A.S., on the architectural survey of Akbar's tomb at Sikandrâ, and of the Jahângîri Mahal, in the Fort at Agra, in which some progress has already been made.

I understand that Dr. Führer has resigned his position as head of the Archæological Survey, and is to be succeeded by Mr. Ed. W. Smith.

WILLIAM SIMPSON.

## GREGOROVIUS'S *HADRIAN.*

*The Emperor Hadrian: A Picture of the Græco-Roman World in his Time. By F. Gregorovius. Translated by Mary E. Robinson.* 8o. *Lond.* 1898. [*Messrs.: Macmillan & Co.*]

Two or three short chapters on sculpture and architecture added to a life of Hadrian may in the hands of a Gregorovius serve to convey some impression of the extent of that emperor's encouragement of the fine arts. But they are far from sufficient to illustrate the character of the artistic renaissance of that time, which is just what we most want to know about Hadrian. We cannot blame Gregorovius for not being aware that the Pantheon had been rebuilt by that Emperor, because the fact was not known, if I remember rightly, in 1883, when the last edition of his *Life of Hadrian* appeared. But a translator who takes in hand a book of research which is already fifteen years old might be expected to edit it in some measure.

As regards the translation, it seems to me very agreeable reading except in some parts where it has to do with sculpture. What, for instance, could be worse than to read (page 445), "Stephanus also carved the Menelaos; and the beautiful group of Electra and Orestes in the Villa Ludovisi are supposed to be original"? The Menelaos here referred to was a sculptor, and had been *trained* not *carved* by Stephanus, as is well known from the inscription on his group of

Orestes and Electra in the Villa Ludovisi. The word used by Gregorovius is *bildete*. On page 348, "the torso of the weeping Niobe" should be read the "*hurrying Niobide*," the word in the German being *fliehende* not *flehende*. It was perhaps natural enough to think of Niobe as "weeping," but when Gregorovius further describes the torso as being in the Vatican and as "a copy of the Iris of Phidias from the Parthenon," any one with the least knowledge of the remains of ancient art would at once recognise the hurrying Niobide. The same want of acquaintance with this branch of her subject is shown by the translator when she turns the German *Marmorschranken* into *coffers of marble* (page 345), the reference being to the two large bas-reliefs in the Forum near the Arch of Severus. On page 365 the "Panathenian stadium over the Ilissos" should be "beyond the Ilissos;" p. 187, for φλυρίας read φλυαρίας, and on page 351 for Welker read Welcker. In a number of instances the Greek accents are wrong.

A. S. MURRAY.

## NOTES, QUERIES, AND REPLIES.

### Skeleton Buildings.

From R. LANGTON COLE [*A.*]—

I should like to comment upon two points raised by the discussion on Mr. Gibson's Paper, "Fire-proof Construction in the United States," published in the JOURNAL of 10th December last. I intended to do so earlier, but have been prevented by want of time, and I trust the interest of the subject will excuse my writing after so long an interval.

In reference to Mr. Delissa Joseph's remarks, it is quite true that the ratio of open spaces to solids, required by the Building Act in London, does limit the extent to which fronts can be constructed of iron and glass, above the ground-floor story; but this limitation is not, I think, more than is imposed by considerations of convenience and appearance. A glance at the published photographs of the Bank of Syracuse will show that the openings in its walls are well within the limits of our Act, but this restriction has not prevented the use of the skeleton frame as the real structure of the building.

There is no necessity, in London, to do more than enclose one half of the area of the external wall of each story with brickwork of the thickness proper to the *height of the story itself*, for the height of every wall standing on a bressummer commences from the bressummer—section 5 (7 and 10). It follows that there would be very few cases in which warehouse walls need be more than 14 inches thick, with recesses where desired, and those of other buildings 9 inches thick; less than this would hardly be weather-proof or convenient.

In regard to the bearing of the bressummers, a point raised by Mr. Solomon, I do not think that the words of section 56, taken together, bear the construction he puts upon them. As I read it, the bressummer is to have a bearing on an iron story-post in addition to any bearing *it may have* on any party wall, and the possibility of its having no such bearing is recognised by sub-section 1.

That this view is accepted in practice is shown by a row of lofty shops in Finchley Road, which have the bressummers over the ground floor bearing on an H iron stanchion placed in front of the party wall, and common to both sides of the latter. These stanchions have since been cased with thin granite pilasters and cement splays, but this is only the American fashion in use in England.

Whether the use of skeleton framing is of advantage or not must depend on the circumstances of each building; my point is that there is nothing in the London Building Act to prevent its adoption.

### Cav. Boni's Discoveries at Rome.

Mr. John Hebb [*F.*] sends for publication the following extracts from a letter he received from Cav. Giacomo Boni [*Hon.Corr.M.*], written a few hours after his recent discoveries at the Roman Forum:—

"Now that the tomb of Romulus has been recognised as such, and I am not looked at with such painful suspicion as I was yesterday morning when my conviction was ripe, I think it may interest you, from a mere psychological point of view, to know what are the sensations which precede and accompany discoveries which are not casual.

"A general nervous restlessness preceded my discovery of the cella of the Temple of Vesta, and of the arch of the Temple of Julius Cæsar. The idea that the supposed basement of an equestrian statue close by the *Rostra Vetera* could only be the *Rostra Vandalica* struck me one night, and I got up and dressed myself to wait for daybreak, when, going down to the Forum, I ascertained the existence of the holes through which passed the prows of the ships.

"A few weeks ago I noticed that a rounded piece of travertine towards the south side of the Forum could only belong to a *margo* [curb], and there I found the road which corresponds with the *Via Sacra* which went from the *Regia usque in Arcem*, and the idea struck me like lightning that the same road went originally straight to the major axis of the Colosseum, and that the Arch of Titus must have been displaced by Hadrian from the original *summa Via Sacra* to its present site.

"Following the branch of the road which passes now under the Arch of Septimius Severus, I reached the *Comitium*, a piazza paved with slabs of travertine, and began to realise how the Temple of Concord faced it, as if the goddess were trying to join the rival hands of the patricians and of the

people. The same painful excitement which I had experienced on previous occasions overcame me as I directed my workmen towards the front of the Curia or Senatus. Last Friday I told them: 'There, a few yards ahead of you, a black stone is to be found.' 'It is there,' replied one of them. 'How do you know it is there?' I asked. 'Because you told us, and we always find what you tell us.' On Monday evening (it was after sunset and almost dark) the same workman ran after me and said: 'I have found it!' 'What?' 'The black stone.' Yesterday morning I identified the *nero antico* as the *niger lapis* of Festus, and entered in my usual state of calm, with almost a touch of indifference for what I found.

"Summing up my fresh impression, I think that discoverers do not deserve any special praise for such results as they cannot help attaining. I only wish it were less painful to attain them."

## MINUTES. VIII.

At the Eighth General Meeting (Ordinary) of the Session, held Monday, 20th February 1899, the President, Professor Aitchison, R.A., in the Chair, with 16 Fellows (including 4 members of the Council), 27 Associates (including 1 member of the Council), 1 Hon. Associate, and several visitors, the Minutes of the Meeting held 6th February 1899 [p. 208] were taken as read and signed as correct.

The decease was announced of James Murray, elected Associate in 1851, Fellow in 1867, and placed on the list of Retired Fellows in 1889.

The following members attending for the first time since their election were formally admitted and signed the respective Registers—viz. Henry Hoyne Fox, *Fellow*, and Henry Albert Collins, *Associate*.

Papers on PUBLIC LIBRARIES by Mr. J. M. Brydon [*F.*] and Mr. F. J. Burgoyne having been read, and illustrated by lantern-slides, a discussion ensued, and a vote of thanks was passed to the authors by acclamation.

On the motion of Mr. Brydon, the cordial thanks of the Institute were accorded the American architects and others who had courteously furnished him with particulars of the libraries treated of in his Paper, and for the loan of designs, drawings, and photographs exhibited in the Meeting-room in illustration thereof.

The proceedings then closed, and the Meeting separated at 10.20 p.m.

## LEGAL.

### The London Building Act: Exempted Building.

The case of *Drury v. Rickard*, heard in the Queen's Bench Division on the 6th February, was a special case stated for the opinion of the Court by a Metropolitan Police Magistrate. The material facts and the gist of the judgment of the Court, as reported in the *Law Journal*, are as follows:—

The respondent, a builder, employed by one Pawley, was engaged in erecting certain buildings in the parish of St. Margaret, Westminster. By agreements, dated 19th November 1897, Pawley agreed to grant to the Commissioners of Her Majesty's Works leases of the pieces of land on which the buildings were being erected, and the buildings, for twenty-one years from 25th December, 1897, or so soon thereafter as the buildings should in the opinion of the officers of Her Majesty's Office of Works be fit for occupation, at the yearly rent of £4,625. The agreements further provided that the occupation of and the rent for the premises should commence as soon after 25th December 1897 as in the opinion of the officers the premises should be fit for occupation, and that the Commissioners might take possession of such rooms as might be completed before the whole building was ready for occupation, at a proportionate rent. The buildings having exceeded 80 feet in height, the appellant, as district surveyor under the London Building Act 1894, served upon the respondent notices that the buildings were not in conformity with the Act, and required them to be brought into conformity with it. The respondent claimed that the buildings were, by section 202, exempted from the Act, and the appellant admitted the exemption. Subsequently, on 1st June 1898, the appellant served on the respondent, pursuant to section 151 of the Act, a notice of irregularity requiring him to reduce the height of one of the buildings. On 5th July 1898 the respondent appeared to answer a complaint by the appellant in consequence of his not having complied with this notice. There was no evidence that the officers of the Office of Works had certified the building fit for occupation, but it appeared that an officer of the Commissioners of Works had visited and examined it and made suggestions. The magistrate held that the building was exempted from the Act by section 202, and dismissed the complaint subject to the statement of a case.

Upon the following points taken before him but not argued, the magistrate gave no decision:—1. Whether the building came within the exemption in section 202; 2. Whether the London County Council consented to the building being erected to a greater height than 80 feet; and, in the alternative, whether the Council waived the provision as to height and were estopped from insisting on its observance.

The question for the Court was whether the building was exempted from the provisions of the Act by section 202.

Section 47 of the London Building Act 1894 provides that "a building (not being a church or chapel) shall not be erected of or be subsequently increased to a greater height than 80 feet."

Section 202 provides that "there shall be exempted from so much of the provisions of this Act as relates to buildings and structures: . . . . any building, structure, or work vested in and in the occupation of any department of Her Majesty's Government. . . ."

*F. F. Daldy* (with him *H. F. Dickens, Q.C.*) for the appellant.

*Horace Avory* and *Hugo Marshall* for the respondent.

The COURT (Mr. Justice LAWRANCE and Mr. Justice CHANNELL) held that the building in question was not exempted from the provisions of the Act by section 202. It could not be said that it was "vested in" any Government department. The Commissioners of Works had agreed to take a lease of it for twenty-one years from 25th December 1897, or so soon thereafter as in their opinion it was fit for occupation. They were entitled to a lease on that date, but the other party could not compel them to accept one until they exercised their election. Specific performance could be enforced by the Commissioners only, and therefore, according to the doctrine of equity, no equitable interest in the building was vested in them. That being so, it was unnecessary to decide whether the building was "in the occupation" of the Commissioners. The magistrate's decision was wrong, and the case must go back to him both on that ground and also because he had not decided upon two of the points taken before him.

**Obituary.**—The death is regretfully recorded of Mr. Hayward Richardson Brakspear, of Sudbury, Middlesex, who passed the qualifying Examination and was elected Associate in 1888.